TANDBERG television
Part of the Ericsson Group

EQ6800
Edge QAM

Cable operators are constantly competing against satellite and IPTV operators. The need to offer more services over the cable network, while protecting content owners against broadcast piracy is a prime consideration. Offering of video-on-demand (VOD) services is one of the ways that cable operators can provide a richer viewing experience to users.

Located at the network edge, the TANDBERG EQ6800 is a key component for the deployment and running of any cost-effective video-on-demand service over cable networks. The EQ6800 provides unrivalled density and flexibility for remote multiplexing, QAM modulation and UHF up-conversion in a single highly integrated 1RU unit. With built-in support for DVB Common Scrambling Algorithm, the EQ6800 protects against broadcast piracy.

PRODUCT OVERVIEW

Specially Designed for VOD Market

The EQ6800 unit with market leading QAM density is specially designed to address the needs of the video-on-demand market. It is fully integrated with leading video servers.

Cost Reductions

With market leading QAM density, modulation and up-conversion in a single 1RU enclosure, enables space and cost savings. Fewer numbers of units need to be installed, configured and maintained giving further saving through operational costs, time and labour.

Increased Reliability

The highly integrated unit facilitates the need for fewer units and thus increases the overall system reliability

Remote Access

The EQ6800 provides web access, thus allowing operators to remotely configure and monitor its status via GUIs. It further provides SNMP messages for monitoring platforms such as nCompass Control.

BASE UNIT FEATURES

High Density Edge QAM (EQ6800/BAS)

The EQ6800 can accommodate either 1 or 2 modulator assemblies, providing up to 24 QAM channels from a single rack unit. Each modulator assembly supports either 8 or 12 QAM channels. Core features of EQ6800 include:

- Reception of individual program streams over Gigabit Ethernet
- Flexible configuration delivering 8, 12, 16, 18 or 24 QAM channels
- Two adjacent QAM channels per F-connector output
- Advanced de-jittering algorithms to reconstruct DVB compliant streams
- PID remapping and basic PSI extraction, regeneration and insertion
- Multiplexing and stream routing according to static configuration
- Optical (option) or electrical Gigabit Ethernet input
- Redundant 1+1 optical gigabit input using optional SFP modules
- Control via TANDBERG Television system management applications
- SNMP remote monitoring
- Simultaneous support of HD and SD streams

SOFTWARE OPTIONS

DVB Conditional Access Scrambling (EQ6800/SWO/DVBCA)

EQ6800 protects against broadcast piracy using built-in DVB Common Scrambling Algorithm.

- Scrambling enabled on a per-service basis
- Capable of scrambling every service
- Standard Simulcrypt/OpenCAS interfaces

HARDWARE OPTIONS

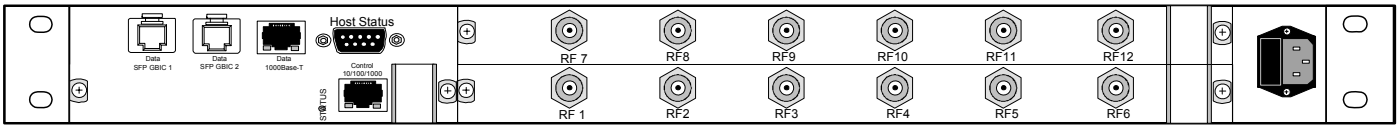
8-Channel QAM Modulator Assembly (EQ6800/HWO/8QAM)

- 4 F-type connections with two adjacent QAM channels on each

12-Channel QAM Modulator Assembly (EQ6800/HWO/12QAM)

- 6 F-type connections with two adjacent QAM channels on each

SAMPLE CONFIGURATION



SPECIFICATIONS

Inputs

Gigabit Ethernet Interface (one active input)

Electrical RJ-45 (1000BASE-T), IEEE802.3ab

Optical SFP† (1000BASE-SX/LX), IEEE802.3z

Redundant SFP† (optionally provides 1+1 optical input redundancy)

Input Capability

Capable of processing a fully-loaded Gigabit Ethernet link

Up to 384 CBR single program transport streams

Stream encapsulation in UDP (RFC 768)

Up to 7 transport stream packets per IP datagram (auto detected)

Removes up to +/-20ms input jitter

Support for unicast and multicast flows (IGMPv1)

†SFP modules are not included as standard, but can be supplied separately if required

Outputs

QAM

75Ω F-type connector

ITU-T J.83 Annex A, B and C

64, 256 QAM constellations

Symbol rate up to 7.0Msym/s

6 or 8 MHz bandwidth

Frequency range 53 – 867 MHz, adjustable in 10KHz steps

Frequency accuracy better than +/- 10KHz

RF output power level 44-58 dBmV adjustable in 0.1dB steps

RF output power accuracy +/- 1.5dB

Output return loss > 12dB

MER > 40dB

BER < 10e-9

Each output provides two adjacent QAM channels (one or both of the two channels may be muted)

Processing

Rate detection and de-jittering of each incoming transport stream

Extraction of incoming PSI

PID remapping as required

Automatic generation and insertion of outgoing PSI tables

MPEG-2 multiplexing of up to 24 multiple program transport streams in accordance with ISO/IEC 13818-1

Control

Dedicated 10/100 Ethernet control port (RJ45)

SNMP and HTTP control

RS-232 port for basic configuration

Complete configuration possible with a single file download to ease large deployments

Physical and Power

Dimensions (W x D x H)

483 x 370 x 44mm (19” x 13.5” x 1RU)

Approximate Weight

11Kg (24lb)

Power Input

100–120 Vac or 220–240 Vac wide ranging

Power Consumption

Max. 150W, depending on configuration

Environmental Conditions

Operating Temperature

0°C to +50°C (32°F to 122°F) ambient with free air flow

Relative Humidity

0% to 90% (non condensing)